



Conservation Services Group

40 Washington Street
Westborough, MA 01581

Tel 508.836.9500

Fax 508.836.3138

www.csgrp.com

Via email: drps@state.ma.us

August 18, 2005

Howard B. Bernstein
RPS Program Manager
Massachusetts Division of Energy Resources
100 Cambridge St, Suite 100
Boston, MA 02114

Dear Howard:

Conservation Services Group, Inc. ("CSG") thanks you for the opportunity to comment on the "Notice of Inquiry Regarding Some Proposed Revision of the Regulations Pertaining to the Definition of 'Low-Emission, Advanced Biomass Power Conversion Technologies'" ("NOI") dated July 1, 2005. Below you will find CSG's comments on the proposed revisions as well as answers to the specific questions that were posed in the NOI.

CSG's Comments on the Proposed Revisions

1. Definition of Eligible Biomass Fuel

CSG supports having the definition of "Eligible Biomass Fuel" revised to be explicit regarding the eligibility of C&D and to define that term in the same manner as DEP. More comments are found in our response to Question H below.

2. Eligibility Criteria for "Low-Emission, Advanced Biomass Power Conversion Technologies"

CSG applauds the DOER and DEP on the development of comprehensive performance standards for both the "low emissions" and the "advanced biomass power conversion technology" criteria. Our specific comments are below in response to the questions posed by DOER.

3. Retrofitting with Eligible Biomass Technologies Waiver

In order for the renewable energy market to grow and for MA RPS eligible facilities to receive future financing, it is critical that the decisions made by DOER under the April 16, 2004 “Guideline on the MA RPS Eligibility of Generation Units that Re-tool with Low Emission, Advanced Biomass Technologies” (“Guideline”) stand. Regulatory certainty is of the utmost importance in the project development process. As a result, and in order to maintain DOER’s credibility and preserve the willingness of the financial community to accept DOER’s decisions as the basis for project finance, these guidelines must remain valid regardless of any future decisions.

- 3.1 Although it is relevant to analyze the maximum potential supply that could come from re-tooled existing biomass facilities, it is important to note that the maximum potential is much higher than what will ultimately prove to be technically and economically feasible in the marketplace.
- 3.2. A number of stakeholders have expressed concern that the Guideline is inconsistent with the legislative intent of the RPS. However, the advances in air pollution control technologies and boiler retrofit options offer significant opportunities for developers to achieve the stated public purpose of replacing dirty generation with clean generation. These advancements would come at a minimum cost to the Massachusetts ratepayers.
- 3.3. It is a historical reality that existing biomass facilities are not competitive in the electricity market; therefore, these facilities will likely shut down once the PURPA rate orders expire. This will result in a decline in the overall use of renewable resources in New England. Without the ability to participate in premium programs such as the RPS, these facilities will have no incentive to operate under current conditions, let alone upgrade.

4. Time Limits on Project Start-Up after Statement of Qualification or Advisory Ruling

Refer to question G below.

5. Special Provision for Any Fuel Fabricated from both RPS-Eligible and Ineligible Feedstocks

Refer to question H below.

CSG's Comments on DOER's Questions About the Proposed Revisions

- A) What specific improvements made to biomass stoker combustion technology have occurred over the past 20 years? Would any of these, individually or collectively, justify DOER's regarding a newly installed, stoker combustion biomass plant as using "advanced biomass power conversion technology"?
- In regards to adopting a performance standard approach, it is appropriate to allow the market to determine the best and most cost-effective technological solutions that will produce consistent and reliable results. The biomass power conversion technologies that are currently in common use (e.g., stoker, fluidized bed, bubbling bed and gasification) have been in commercial use for decades. It would be unreasonable and counterproductive for DOER to set any performance standard because it could categorically exclude a particular technology.
- B) Is Net Heat Rate, as defined in Section 2(b) of the Proposed Revisions, a reasonable basis for determination of "advanced biomass power conversion technologies"? What protocols should DOER require of biomass plant developers to appropriately ascertain their Net Heat Rates (considering fuel variability, system capacity factors, operational characteristics, etc.)? Can the same protocol work for both new and retrofitted biomass plants? Are the Net Heat Rates provided in Table 1 illustrative of advanced, highly efficient technologies that now or soon will be commercially available? Do you recommend a better alternative to setting Net Heat Rates according to plant size or type? If Net Heat Rate is *not* a reasonable determination of Advanced Technology, identify and describe in detail what standards/criteria you think would better accomplish the identification of "advanced biomass power conversion technologies." Any information that you can provide regarding the net heat rates of actual plants in operation today, as well as the costs of the various types of plants (both new and retooled), would be extremely useful.
- CSG supports the proposal made by Jansen Combustion and Boiler Technologies, Inc. in comments dated July 25, 2005 for a simple heat rate analysis on the "combustion" or "prime mover" component of the biomass power conversion technology. Using a specific heat value, this approach focuses on the elements of the power conversion that are uniquely related to the efficiency of capturing the heat value of biomass fuel and converting it into steam. The efficiency levels by which the owner/operator chooses to utilize the heat value of the steam to generate electricity or serve thermal load is an economic decision that may vary seasonally.
- C) Do the emission rates and monitoring requirements specified in Tables 2 and 3 appropriately capture the "low-emissions" criteria that are achievable by "advanced biomass energy conversion technologies"? What are the appropriate averaging times for the limits? Should special consideration be given to retooled biomass plants?

Should limits be set according to boiler size? Are the proposed size ranges appropriate? If not, please provide and explain alternative.

- CSG supports Table 2. The limitations show significant improvements over historic emissions levels. However, it is important to note that adequate notice of any changes is necessary.

D) Would output-based emission rates reflect the environmental impact of biomass generation units better than the proposed input-based rates? If so, what limits would be appropriate? Alternately, what method for determining such limits would be appropriate and reliable?

- As a general matter of public policy, CSG supports output-based emission rates; particularly with respect to biomass plants where there is great variability in fuel inputs.

E) Is the proposal to increase the stringency of the Heat Rate and emission standards over time (at Section 2(g) of the Proposed Revisions) through RPS Guidelines, in conjunction with the formal revision of DEP air quality regulations and with two-year lead-time reasonable? Do you have any procedural refinements to suggest?

- CSG supports the proposal to increase the stringency of the Heat Rate and emission standards provided that new projects under the existing standards are allowed to proceed during the regulatory process.

F) Do you think that the competing market issues and policy objectives related to retrofitting existing biomass units (as discussed at Section 3(b) of the Proposed Revisions and in the Issues sections) are adequately and reasonably addressed by a proposed time limitation of RPS eligibility for RECs? Do you think that the three-year limit for receiving RECs is appropriate? Support your critique with specific data on the costs (capital and operating) and payback periods, rates of return, or net present value typical for specific types of retooling.

- CSG strongly opposes the time limitation of RPS eligibility for RECs. The increased operations costs and decreased efficiency (due to increased parasitic load) will reduce the income for energy sales, making plants even less competitive in the power markets than before they were retrofitted. Other important factors include: an increase of material costs (e.g. ammonia), the health and safety risks for having ammonia on site, and the high costs of replacing catalysts. Based on conversations with several biomass generators, it is CSG's understanding that for a 22 MW plant, these costs are approximately \$1 million per year.

G) Do you concur with DOER's proposal (at Section 4 of the Proposed Revisions) to place time limits on the completion of projects that have received Statements of

Qualification? On the submittal of Statement of Qualification Applications for proposed projects that have received Advisory Rulings? Are the proposed time limits appropriate, or would other limits be more fair?

- CSG does concur with DOER's proposal of placing a time limitation on the completion of projects that have received Statements of Qualification. However, one year is an insufficient amount of time to achieve site control and to obtain the necessary regulatory approvals needed to invest in significant engineering. CSG proposes that a more reasonable approach is a three-year limit for new/ retrofitted facilities and a two-year limit for facilities for which DOER has already issued Advisory Rulings.

H) Is DOER's proposed method (at Section 5 of the Proposed Revisions) for dealing with composite fuels, fabricated or blended from both eligible and ineligible feedstocks, fair and appropriate?

- CSG supports DOER's proposed methodology for dealing with composite fuels. However, CSG urges DOER to adopt standard protocols (including sampling frequencies, testing methods, records retention, etc.) with mandatory third party auditing. Using this approach will enable the fuel manufacturer to provide buyers with certainty regarding the fuel content and the percentage of the heat value that is eligible for MA RPS RECs. Furthermore, all generation units should be explicitly required to report to the NEPOOL GIS as multi-fuel facilities for any month(s) that such fuels are used. The existing NEPOOL GIS Operating Rules provide for the appropriate allocation of the monthly certificate production between eligible and ineligible MA RPS certificates.
- CSG recognizes that DEP has the legislative and regulatory responsibility to oversee the definition and inclusion of C&D as an eligible renewable fuel stock. CSG supports the approach of relying on DEP's authority to set the standard, similarly to the rules that were set regarding air pollution.

Please feel free to contact me if you have any questions regarding our comments. Thank you.

Sincerely,

Patricia Stanton
Director, Renewable Energy Markets
Conservation Services Group